



Michigan State Police Retirement System

Comprehensive Annual
Financial Report for the
Fiscal year Ended
September 30, 1997

A Pension Trust Fund of
the State of Michigan
John Engler, Governor

Michigan State Police Retirement System

**Comprehensive Annual Financial Report
for the Fiscal Year Ended September 30, 1997**



MSPRS

**Prepared by:
Office of Retirement Systems
Michigan State Police Retirement System
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P.O. Box 30176
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INTRODUCTORY SECTION

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The cost of printing this report was \$XX, which was paid for by the retirement system at no cost to taxpayers.

INTRODUCTORY SECTION

Michigan State Police Retirement System

Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 1997

INTRODUCTORY SECTION



MSPRS

INTRODUCTORY SECTION

Letter of Transmittal

State Police Retirement System
General Office Building, Third Floor
P.O. Box 30176
Lansing, Michigan 48909
Telephone (517) 322-5103

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF MANAGEMENT AND BUDGET

March 4, 1998

The Honorable John Engler
Governor, State of Michigan,

Members of the Legislature
State of Michigan
Retirement Board Members
and
Members, Retirees and Beneficiaries

Ladies and Gentlemen:

We are pleased to present the annual report of the Michigan State Police Retirement System (MSPRS or System) for fiscal year 1997.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the management of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

The Michigan State Police Retirement System was established by legislation under Public Act 251 of 1935. It now operates under the provisions of Public Act 182 of 1986 as amended. The number of active and retired members and beneficiaries for the System is presented on page 14 of this report. The purpose of the System is to provide benefits for all state police. The services provided by the staff are performed to facilitate benefits to members.

The 1997 annual report is presented in five sections. The introductory section contains the transmittal letter, the identification of the administrative organization and professional consultants used by the System. The financial section contains the financial statements of the System and certain supplemental schedules. The investment section summarizes investment activities. The actuarial section contains the independent consulting actuary's certification, an outline of actuarial assumptions and methods, and other actuarial statistics. The statistical section contains statistical tables of significant data pertaining to the retirement System.

MAJOR INITIATIVES FOR THE YEAR

Customer Information Center

In fiscal 1997, the MSPRS and the other systems within the Office of Retirement Systems took a major step toward addressing member concerns regarding telephone communications.

Letter of Transmittal (Continued)

Beginning in the fall of 1997, MSPRS joined forces with the Michigan Public School Employee Retirement System, the Judges Retirement System and the State Employees Retirement System to establish a Customer Information Center (CIC). This toll-free telephone call-in center serves as a comprehensive clearinghouse for information for members of all four retirement systems.

The CIC staff, chosen from all four retirement systems, is cross-trained to allow any staff member to answer questions about any system. Questions that are too specialized for CIC staff to answer will be directed to staff of the appropriate retirement system. The goal is that CIC will answer 60% of all calls during the first six months and 90% thereafter.

The CIC became operational in October 1997.

Increased Flexibility for Insurance Enrollment

As part of continuing efforts to improve services and streamline its workflow processes, on April 1, 1997, MSPRS announced that instead of having a single annual open enrollment period for adding or changing insurance coverage or carriers, new changes will be allowed at any time. Persons contacting the retirement office to change or add health, vision, and/or dental coverage will be sent the appropriate form on which all changes are to be designated. The new coverage will take effect six months later.

FINANCIAL INFORMATION

Additions to Plan Net Assets

The reserves needed to finance retirement benefits are accumulated through the collection of employer and employee contributions and through earnings on investments. Contributions and investment income (including unrealized investment gains and losses) for fiscal year 1997 totaled approximately \$230.6 million (See Table 1).

The total contributions and investment income increased 48.8% from those of the prior year due primarily to increased investment earnings. Employer contributions decreased 2.3% and investment income increased 75.4% from the prior year. The investment section of this report reviews the results of investment activity for 1997.

Table 1 (\$ in Millions)			Increase (Decrease) Amount	Increase (Decrease) Percentage
	1997	1996		
Member contributions (less than \$100 thousand)	\$ 0	\$ 0	\$ 0	0 %
Employer contributions	51.9	53.1	(1.2)	(2.3)
Investment Income	178.7	101.9	76.8	75.4
Total	\$ 230.6	\$ 155.0	\$ 75.6	48.8 %

Deductions From Plan Assets

The primary expenses of the System include the payment of pension benefits to members and beneficiaries, payments for health, dental and vision benefits, refund of contributions to former members, and cost of administering the retirement system. The growth of health care expenditures continued at a moderate rate during the year. As a result, expenses for health care

INTRODUCTORY SECTION

Letter of Transmittal (Continued)

increased by \$0.4 million from \$10.5 million to \$10.9 million during the fiscal year. Total deductions for fiscal year 1997 were \$54.4 million, an increase of 10.8% over 1996 expenses (see Table 2). The increase in benefit expenses resulted from a combination of increased benefits payments per retiree and increased number of retirees paid.

Table 2 (\$ in Millions)			Increase (Decrease) Amount	Increase (Decrease) Percentage
	1997	1996		
Pension benefits	\$ 43.3	\$ 38.3	\$ 5.0	13.1 %
Health care benefits	10.9	10.5	0.4	3.8
Refunds	0.0	0.0	0.0	0.0
Administrative expenses	0.2	0.3	(0.1)	(33.3)
Total	\$ 54.4	\$ 49.1	\$ 5.3	10.8 %

Internal Control

The management of the System is responsible for maintaining a system of adequate internal accounting control designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization, and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with generally accepted accounting principles. The internal control structure is designed to provide reasonable assurance regarding the safekeeping of assets and reliability of all financial records.

YEAR 2000

As the new millennium approaches, institutions throughout the world are faced with the problem that any system or business with a date component may fail or produce invalid results the first time a date in the new millennium is encountered. The System fully recognizes the significance and magnitude of this impending problem and is developing a comprehensive program to achieve Year 2000 compliance.

INVESTMENT

The State Treasurer is the investment fiduciary and custodian of all investments of the System pursuant to state law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment return rate. The investment activity for the year produced a total rate of return on the portfolio of 23.6%. For the last five years, the System has experienced an annualized dollar weighted rate of return of 13.8%. A summary of asset allocation and rates of return can be found on page 34 of this report.

FUNDING

Funds are derived from the excess of revenue over expenses. Funds are accumulated by the System in order to meet future benefit obligations to retirees and beneficiaries. The percentage computed by dividing the actuarial value of assets by the actuarial accrued liability is referred to as the "funded ratio". This ratio provides an indication of the funding status of the System and, generally, the greater this percentage, the stronger the System. As of September 30, 1997, the actuarial value of the assets and actuarial accrued liability of the System were \$787 million and \$880 million resulting in a funded

Letter of Transmittal (Continued)

ratio of 89.4%. As of September 30, 1996, the amounts were \$698 million and \$823 million respectively. A historical perspective of funding levels for the System is presented on page 23 of this report

As of September 30, 1997, the ratio of pension plan net assets at market value to the actuarial accrued liability was 106%.

PROFESSIONAL SERVICES

The financial statements of MSPRS are audited periodically by the Auditor General as part of his constitutional responsibility. A copy of the audit report can be obtained directly from the Office of the Auditor General.

Statute requires that an annual actuarial valuation be conducted. The purpose of the valuation is to evaluate the mortality, service, compensation and other financial experience of the retirement system and to recommend employer funding rates for the subsequent year. This annual actuarial valuation was completed for the fiscal years ended September 30, 1997 and 1996. Actuarial certification and supporting statistics are included in the actuarial section of this report.

ACKNOWLEDGMENTS

The preparation of this report was accomplished with the dedication and cooperation of many people. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship of the funds of the System.

We would, therefore, like to express our appreciation for the assistance given by staff, advisors and many people who contributed to its preparation. We believe their combined efforts have produced a report that will enable the employer and plan members to better evaluate and understand the Michigan State Police Retirement System. Their cooperation contributes significantly to the success of MSPRS.

Sincerely,



Janet E. Phipps, Director
Department of Management and Budget



Christopher M. DeRose, Director
Office of Retirement Systems

INTRODUCTORY SECTION

Administrative Organization

Retirement Board Members

James S. Neubecker, C.P.A., Chairperson
Deputy Auditor General
Statutory Member

D/Sgt. William Gabriel
Representing Sergeants & Below
Term Expires December 31, 1997

1st/Lt. Richard J. Darling
Representing Lieutenant and Above
Terms Expires December 31, 1998

James R. Snody, Jr.
Retiree Member
Term Expires December 31, 1999

Kenneth Harb
General Public
Term Expires December 31, 1997

Roy Pentilla
Representing State Treasurer
Statutory Member

Jan Miller
Representing, State Employer
Statutory Member

George M. Elworth
Representing Attorney General
Statutory Member

Capt. Timothy Yungfer
Representing Director, Dept. of
State Police
Statutory Member

Administrative Organization

**Department of Management and Budget
Office of Retirement Systems
Third Floor, Wing A, General Office Building
7150 Harris Drive
P.O. Box 30176, Lansing, Michigan 48909-7526
(517)322-5103**

Christopher M. DeRose, Director

Deborah A. Gearhart, Director
Finance & Administration

Virginia L. Bomar, Interim Director
State Police Retirement System

Advisors and Consultants

Actuary

The Segal Company
Michael J. Karlin, F.S.A., M.A.A.A.
New York, New York

Auditors

Thomas H. McTavish, C.P.A.
Auditor General
State of Michigan

Investment Manager and Custodian

Douglas B. Roberts
State Treasurer
State of Michigan

Legal Advisor

Frank J. Kelley
Attorney General
State of Michigan

Medical Advisors

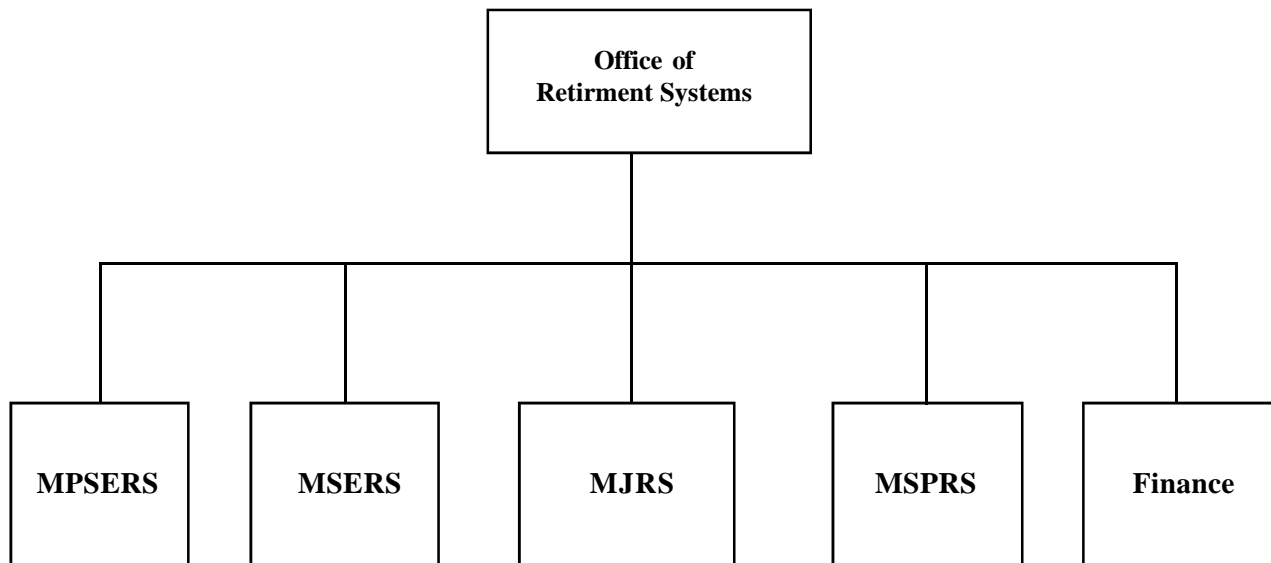
Preferred Medical Assoc.
Marquette General Hospital

Investment Performance Measurement

S.E.I. Funds Evaluation
Chicago, Illinois

Administrative Organization

Organization Chart



- MPERS - Michigan Public School Employees' Retirement System
- MSERS - Michigan State Employees' Retirement System
- MJRS - Michigan Judges' Retirement System
- MSPRS - Michigan State Police Retirement System

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Michigan State Police Retirement System

**Comprehensive Annual Financial Report
for the Fiscal Year Ended September 30, 1997**

**FINANCIAL
SECTION**



MSPRS

FINANCIAL SECTION

Statements of Pension Plan and Postemployment Healthcare Plan Net Assets

	September 30, 1997			September 30, 1996		
	Pension Plan	Health Plan	Total	Pension Plan	Health Plan	Total
Assets:						
Cash	\$3,086,279	\$14,314	\$3,100,593	\$2,791,871	\$(7,011)	\$2,784,860
Receivables:						
Amounts due						
from employer	3,283,050	15,227	3,298,277	3,062,106	\$(7,690)	3,054,416
Interest and dividends	4,329,844	20,082	4,349,926	3,926,071	\$(9,859)	3,916,212
Sale of investments	1,710,116	7,932	1,718,048	2,664,225	\$(6,690)	2,657,535
Total receivables	9,323,010	43,241	9,366,251	9,652,402	(24,239)	9,628,163
Investments:						
Short term investments	81,521,829	378,103	81,899,932	44,954,005	\$(112,890)	44,841,115
Bonds, notes mortgages and preferred stock	233,770,968	1,084,244	234,855,212	234,592,709	\$(589,115)	234,003,594
Common stock	435,049,378	2,017,786	437,067,164	337,056,972	\$(846,426)	336,210,546
Real estate	58,923,310	273,290	59,196,600	48,456,079	\$(121,684)	48,334,395
Alternative investments	60,465,903	280,445	60,746,348	53,191,853	\$(133,577)	53,058,276
International investments	49,347,523	228,877	49,576,400	32,987,158	\$(82,838)	32,904,320
Collateral on loaned securities	34,056,165	157,955	34,214,120	18,574,405	\$(46,645)	18,527,760
Total investments	953,135,076	4,420,700	957,555,776	769,813,181	(1,933,175)	767,880,006
Total assets	965,544,365	4,478,255	970,022,620	782,257,454	(1,964,425)	780,293,029
Liabilities:						
Warrants outstanding	(284,575)	(1,319)	(285,894)	(295,743)	\$742	(295,001)
Accounts payable and other accrued liabilities	(1,466,033)	(6,800)	(1,472,833)	(2,110,894)	\$5,300	(2,105,594)
Obligations under securities lending	(34,056,166)	(157,954)	(34,214,120)	(18,574,405)	\$46,645	(18,527,760)
Total liabilities	(35,806,774)	(166,073)	(35,972,847)	(20,981,042)	52,687	(20,928,355)
Net Assets Held in Trust for						
Pension and Healthcare Benefits*	\$929,737,591	\$4,312,182	\$934,049,773	\$761,276,412	\$(1,911,738)	\$759,364,674

* A schedule of funding progress is presented on page 23.

The accompanying notes are an integral part of these financial statements.

Statements of Changes in Pension Plan and Postemployment Healthcare Plan Net Assets

	September 30, 1997			September 30, 1996		
	Pension Fund	Health Fund	Total	Pension Fund	Health Fund	Total
Additions:						
Members contributions:						
Other	\$67,750		\$67,750	\$76,743		\$76,743
Military	164		164			
Employer contributions	34,785,548	\$17,066,083	51,851,631	35,994,833	\$17,140,809	53,135,642
Investment income:						
Investment income	177,442,436		177,442,436	101,100,709		101,100,709
Securitized lending income	1,250,729		1,250,729	881,925		881,925
Less investment expenses:						
Real estate operating expenses	(32,091)		(32,091)	(174,465)		(174,465)
Securities lending expenses	(1,209,338)		(1,209,338)	(852,255)		(852,255)
Other investment expenses	(215,894)		(215,894)	(163,940)		(163,940)
Miscellaneous income	50		50	6		6
Total additions	<u>212,089,354</u>	<u>17,066,083</u>	<u>229,155,437</u>	<u>136,863,556</u>	<u>17,140,809</u>	<u>154,004,365</u>
Deductions:						
Benefits paid to plan members and beneficiaries:						
Retirement benefits	43,318,234		43,318,234	38,278,890		38,278,890
Health benefits		9,956,586	9,956,586		9,454,133	9,454,133
Dental/vision benefits		992,690	992,690		1,062,486	1,062,486
Administrative expenses	202,828		202,828	269,005		269,005
Total deductions	<u>43,521,062</u>	<u>10,949,276</u>	<u>54,470,338</u>	<u>38,547,895</u>	<u>10,516,619</u>	<u>49,064,514</u>
Net Increase (Decrease)	<u>168,568,292</u>	<u>6,116,807</u>	<u>174,685,099</u>	<u>98,315,660</u>	<u>6,624,190</u>	<u>104,939,851</u>
Other Changes in Net Assets:						
Interest allocation	(107,113)	107,113				
Net Increase (Decrease) After Other Changes	<u>168,461,179</u>	<u>6,223,920</u>	<u>174,685,099</u>	<u>98,315,661</u>	<u>6,624,190</u>	<u>104,939,851</u>
Net Assets Held in Trust for Pension and Healthcare Benefits:						
Beginning of Year	<u>761,276,412</u>	<u>(1,911,738)</u>	<u>759,364,674</u>	<u>662,960,752</u>	<u>(8,535,928)</u>	<u>654,424,823</u>
End of Year	<u>\$929,737,591</u>	<u>\$4,312,182</u>	<u>\$934,049,773</u>	<u>\$761,276,413</u>	<u>\$(1,911,738)</u>	<u>\$759,364,674</u>

The accompanying notes are an integral part of these financial statements.

FINANCIAL SECTION

Notes to General Purpose Financial Statements

NOTE 1 - PLAN DESCRIPTION

ORGANIZATION

The Michigan State Police Retirement System (MSPRS) is a single employer, state-wide, defined benefit public employee retirement plan governed by the State of Michigan (State), originally created under Public Act 251 of 1935, recodified and currently operating under Public Act 182 of 1986. MSPRS was established by the State to provide retirement, survivor and disability benefits to Michigan State Police. MSPRS is a qualified trust fund under section 401(a) of the Internal Revenue Code.

MSPRS financial statements are included as a pension trust fund in the combined financial statements of the State of Michigan.

MSPRS operates within the Michigan Department of Management and Budget, Office of Retirement Systems. The Department Director appoints the Office Director who serves as Executive Secretary to the MSPRS Board, with whom the general oversight of the retirement system resides. The State Treasurer serves as the investment officer and custodian for the System.

MEMBERSHIP

At September 30, 1997, and 1996, the System's membership consisted of the following:

Retirees and beneficiaries currently receiving benefits:	1997	1996
Regular benefits	1,589	1,499
Survivor benefits	298	287
Disability benefits	131	129
Total	<u>2,018</u>	<u>1,915</u>
 Current employees:		
Vested	1183	1,175
Non-vested	907	960
Total	<u>2,090</u>	<u>2,135</u>
 Inactive employees entitled to benefits and not yet receiving them	<u>43</u>	<u>55</u>
 Total All Members	<u><u>4,151</u></u>	<u><u>4,105</u></u>

Enrollment in the health care fund is voluntary. The number of plan participants and other relevant financial information are as follows.

Health/Dental/Vision Plan	1997	1996
Eligible participants	2,018	1,915
Participants receiving benefits	1,850	1,759

BENEFIT PROVISIONS

Introduction

Benefit provisions of the defined benefit pension plan are established by state statute, which may be amended. Public Act 182 of 1986, State Police Retirement Act, as amended, establishes eligibility and benefit provisions for the defined benefit

Notes to General Purpose Financial Statements

pension plan. Retirement benefits are determined by final average compensation and years of service. Members are eligible to receive a monthly benefit when they meet certain age and service requirements. MSPRS also provides duty disability, non-duty disability and survivor benefits.

A member who leaves State Police employment may request a refund of his or her member contribution account. A refund cancels a former member's rights to future benefits and there is no provision for repaying the refund of contributions to restore the service represented by the refund.

Regular Retirement

The retirement benefit is available if a member retires after 25 years of credited service (employment). The retirement benefit equals 60% of a member's final average compensation and is payable monthly over the lifetime of a member. Final average compensation is the average annual salary for a member's last two years of service with the Department of State Police.

Deferred Retirement

Any member with 10 or more years of credited service who terminates covered employment but has not reached the age of 50 is a deferred member and is entitled to receive a monthly allowance upon reaching age 50, provided the member's accumulated contributions have not been refunded. The deferred benefit is equal to two percent of the final average compensation times the years of service credit.

Non-Duty Disability Benefit

A member with 10 or more years of credited service who becomes totally and permanently disabled not due to performing duties as an employee of the State Police is eligible for a non-duty disability pension. The non-duty disability benefit is 2.4% of the final average compensation times years of credited service (but not more than 25 years).

Duty Disability Benefit

A member who becomes totally and permanently disabled from performing duties as a State Police Officer is eligible for a duty disability pension. The amount, payable monthly, is equal to 60% of the final average compensation.

Survivor Benefit

Upon the death of a member who completed at least 10 years of service, the surviving spouse receives a benefit based on 2.4% of the final average compensation for each year of credited service. If there is no spouse, surviving children are entitled to equally share the benefit until age 18. If death occurs in the line of duty, the surviving spouse receives a benefit of 60% of the final average compensation. Children receive \$100 each month until age 18. A \$1,500 funeral expense is also authorized by statute.

Effective October 1, 1996, the monthly pension paid to beneficiaries was increased 10% if certain requirements were met. This was a one-time increase.

Each October 1, the benefit increases 2% (not to exceed \$500). This non-compounding increase is paid to beneficiaries who have been receiving benefits for 12 months.

Post Retirement Adjustments

Effective October 1, 1996, the monthly pension was increased 10% if certain requirements were met. This was a one-time increase.

FINANCIAL SECTION

Notes to General Purpose Financial Statements

Each October 1, the benefits of all pension recipients increases 2% (not to exceed \$500). This non-compounding increase is paid to persons who have been retired 12 months.

Contributions

Member Contributions — Members currently participate in MSPRS on a noncontributory basis. Under certain circumstances, members may contribute to the System for the purchase of creditable service, such as military, maternity or paternity leave, Peace Corp. or VISTA service. If a member terminates MSPRS covered employment before a retirement benefit is payable, the member's contribution and interest on deposit are refunded. If the member dies before being vested, the member's contribution and interest are refunded to the designated beneficiaries.

Employer Contributions — The statute requires that the employer contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level-percent-of-payroll funding principles so that the contribution rates do not have to increase over time. A chart showing the employer contribution rates is included on page 24 of this report.

Other Post employment Benefits

Under the State Police Retirement Act, all retirees have the option of continuing health, dental and vision coverage. Retirees with this coverage contribute 5% and 10% of the monthly premium amount for the health, dental and vision coverage, respectively. The State funds 95% of the health and 90% of the dental and vision insurance. The payroll contribution rate was 47.1% and 49.7% for 1997 and 1996 respectively.

Retirees are provided with life insurance coverage equal to 25% of the active life insurance coverage, \$1,000 for spouse and \$1,000 for each dependent under age 23. Premiums are fully paid by the State.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting and Presentation

MSPRS financial statements are prepared using the accrual basis of accounting. Contributions from the State are recognized as revenue in the period in which employees provide service. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Reserves

Public Act 182 of 1986, as amended, created the Reserve for Employees' Contributions, Reserve for Retired Benefit Payments, Reserve for Employer Contributions, Reserve for Undistributed Investment Income, and Reserve for Health Benefits and Dental and Vision Benefits. The financial transactions of the plan are recorded in these accounts as required by Public Act 182 of 1986, as amended.

Reserve for Employees' Contributions — Members do not contribute to this fund except to purchase eligible service credit. This fund represents active member contributions and interest less amounts transferred to the Pension Reserve for regular and disability retirement, amounts refunded to terminated members, and unclaimed amounts transferred to the income account. At September 30, 1997, and 1996, the balance in this account was \$1.2 million and \$1.5 million respectively.

Reserve for Retired Benefit Payments — This represents the reserves for payment of future retirement benefits to persons already on the retirement rolls. At retirement, a member's accumulated contributions plus interest are transferred into this reserve. The accumulated contributions come from the Reserve for Employees' Contributions and the interest comes from the Reserve for Undistributed Investment Income. Monthly benefits, which are paid to the retirees, reduce this reserve. At the end of each fiscal year, an amount is transferred from the Reserve for Employer Contributions to fully fund this reserve. At September 30, 1997, and 1996, the balance in this account was \$527 million and \$205 million respectively.

FINANCIAL SECTION

Notes to General Purpose Financial Statements

Reserve for Employer Contributions — All employer contributions are credited to this reserve. Interest from the Reserve for Undistributed Investment Income is credited annually. Amounts are transferred annually to the Reserve for Retired Benefit Payments to fully fund this reserve. At September 30, 1997, and 1996, the balance in this account was \$209 million and \$205 million respectively.

Reserve for Undistributed Investment Income — The reserve is credited with all investment earnings and changes in fair value of assets. Interest is transferred annually to the other reserves. Administrative expenses are paid from this reserve account. The legislature appropriates the funds necessary to defray and cover the administration of the plan. At September 30, 1997, and 1996, the balance of this reserve was \$192 million and \$62 million respectively.

Reserve for Health Related Benefits — This reserve is credited with employer contributions for retirees' health benefits. From this reserve, the retirement system pays 95% of the premiums for hospitalization and medical coverage insurance and 90% of the monthly premium for dental and vision coverage insurance. At September 30, 1997, and 1996, the balance in this account was \$4.3 million and a negative \$1.9 million respectively.

Fair Value of Investments

Plan investments are reported at fair value, except for short-term investments. Short-term investments are carried at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. Real estate debt is valued on the basis of future principal and interest payments and is discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Other investments that do not have an established market are recorded at estimated fair value.

Reporting Entity

MSPRS is a pension trust fund of the State of Michigan. As such, MSPRS is considered part of the State and is included in the State's comprehensive annual financial report as a pension trust fund. MSPRS and the MSPRS' board are not financially accountable for any other entities or other organizations. Accordingly, MSPRS is the only entity included in this financial report.

Investment Income

Dividend income is recognized based on the ex-dividend date and interest income is recognized on the accrual basis as earned. Fair value changes are recorded as investment income or loss. Purchases and sales of investments are recorded as of the trade date (the date upon which the transaction is initiated), except for purchase and sale of mortgages, real estate, and alternative investments which are recorded as of the settlement date (the date upon which the transaction is ultimately completed). The effect of recording such transactions as of the settlement date does not materially affect the financial statements.

Property and Equipment

Office space is leased from the State on a year to year basis. Office equipment is capitalized if the value exceeds \$5,000. These assets are recorded at cost and are reported net of depreciation in the Statement of Plan Net Assets. Such assets are depreciated on a straight line basis over 10 years.

Related Party Transactions

Leases and Services — The retirement system leases operating space and purchases certain administrative, data processing, legal and investment services from the State. The space and services are not otherwise available by competitive bid. The following summarizes costs incurred by MSPRS for such services.

FINANCIAL SECTION

Notes to General Purpose Financial Statements

	<u>1997</u>	<u>1996</u>
Building Rentals	\$ 14,520	\$ 5,790
Administrative services	8,716	21,074
Data processing services	7,710	9,649
Legal	19,740	29,175
Investment	184,790	186,040

Common Cash — The cash account includes \$3,100,593 and \$2,784,860, on September 30, 1997, and 1996, respectively, which represents funds deposited in a common cash investment pool maintained for various State operating funds. The participating funds in the common cash pool earn interest at various rates depending upon prevailing short-term interest rates. Earnings from these activities amounted to \$262,330 and \$130,807 for the years ended September 30, 1997, and 1996, respectively.

Effect of change in accounting principle

During fiscal year 1997, MSPRS adopted the provisions of Governmental Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, and Statement No. 26, *Financial Reporting for Postemployment Healthcare Plans Administered by Defined Benefit Pension Plans*. GASB Statements 25 and 26 establish the financial reporting framework for pension plans. The framework includes fair value accounting for investments (recognition of unrealized investment gains and losses), amortization of unfunded actuarial liabilities over 40 years, and requires certain additional disclosures regarding postemployment healthcare benefits.

The provisions of GASB Statement No. 25 and 26 require restatement of the prior year balances for the effect of changing from reporting investments at cost to reporting investments at fair value. The effect of the change in accounting principle on the net assets held in trust for pension benefits and postemployment healthcare benefits as of September 30, 1995, is shown below.

	<u>Pension</u>	<u>Health</u>	<u>Total</u>
September 30, 1995 Net assets held in trust for benefits, as previously reported	\$ 555,757,500	\$ (7,155,636)	\$ 548,601,864
Cumulative effect of change in accounting principle	107,218,251	(1,440,292)	105,817,959
September 30, 1995, Net assets held in trust, for benefits as restated	<u>662,960,751</u>	<u>(8,535,928)</u>	<u>654,424,823</u>

NOTE 3 - CONTRIBUTIONS

Contributions

Members currently participate in MSPRS on a non-contributory basis. Under certain circumstances, members may contribute to the System for the purchase of creditable service, such as military service or maternity leave. The State is required by Public Act 182 of 1986 as amended, to contribute amounts necessary to finance the benefits of its employees. Contribution provisions are fixed by state statute and may be amended only by action of the state legislature.

Periodic employer contributions to MSPRS are determined on an actuarial basis using the entry age normal actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the actuarial valuation is allocated on a level basis over the service of the individual between entry age and assumed exit age. The portion of this cost allocated to the current valuation year is called the normal cost. The remainder is called the actuarial accrued liability. Normal cost is funded on a current basis. The unfunded actuarial accrued liability is funded over a 40-year period for the 1996-97 fiscal year.

Actual employer contributions for retirement benefits were \$34,785,548 and \$35,994,833, representing 31.6% and 30.9% of annual covered payroll, for the years ended September 30, 1997, and 1996, respectively. Required employer contributions for pensions included:

Notes to General Purpose Financial Statements

1. \$24,334,421 and \$23,747,308 for fiscal years 1997 and 1996, respectively, for normal cost of pensions representing 22.8% and 22.7%, respectively, of annual covered payroll;
2. \$5,523,207 and \$7,777,773 for fiscal years 1997 and 1996, respectively, for amortization of unfunded actuarial liability, representing 5.2% and 7.4%, respectively, of annual covered payroll;

Reclassification of Prior Year Amounts

Certain amounts in the prior year financial statements have been reclassified to conform with the current year presentation.

NOTE 4 - INVESTMENTS

Investment Authority

Under Public Act 380 of 1965, as amended, the authority for the purchase and the sale of investments resides with the State Treasurer. Investments are made subject to the Michigan Public Pension Investment Act, Public Act 314 of 1965, as amended. The Michigan Public Pension Investment Act authorizes, with certain restrictions, the investment of pension fund assets in stock, corporate and government bonds and notes, mortgages, real estate, and certain short term and alternative investments. Investments must be made for the exclusive purposes of providing benefits to active members, retired members and beneficiaries, and of defraying the expenses of investing the assets.

Under Public Act 314 of 1965, as amended, up to 5% of the System's assets in alternative investments and up to 15% of the System's assets in investments not otherwise qualified under Act 315. Alternative investments include limited partnerships and distributions from these partnerships in the form of bonds, common stock and preferred stock.

Derivatives

The State Treasurer does not employ the use of derivatives in the investment of the Common Cash or the investment of trust funds other than the pension trust funds.

Derivatives are used for a small amount of the pension trust fund portfolios. However, derivatives are not used for speculation and they are not used to leverage the investment portfolios. Less than 6% of the total pension trust funds portfolio has been invested from time to time in futures contracts, collateralized mortgages and swap agreements. Swap agreements represent the largest category of derivatives used and represent approximately 5.4% of the total portfolio at market values.

To further diversify the pension funds portfolio into international equities, the State Treasurer has entered into swap agreements with AAA rated counterparties which are tied to stock market indices in seventeen foreign countries. The notional amounts of the swap agreements at September 30, 1997, and 1996, were \$41.23 million and \$29.43 million, respectively. One half of the notional amount is hedged against foreign currency fluctuations. The swap agreements provide that the retirement system will pay quarterly, over the term of the swap agreements, interest indexed to the three month London InterBank offer Rate (LIBOR) the maturity of the swap agreements the pension fund will either receive the increase in the value of the international equity indices from the level of the indices at the inception of the agreements, or pay the decrease in the value of the indices. Swap agreement maturities range from January 1998 to December 2000.

U. S. domestic LIBOR based floating rate notes were purchased in the open market to correspond with the notional amount of the swap agreements. The State Treasurer maintains custody and control of these notes.

The value of these synthetic equity structures is a combination of the value of the swap agreements and the value of the notes. The book value represents the cost of the notes. The current value represents the current value of the notes and the change in value of the underlying indices from the inception of the swap agreements. The current value is used as a representation of the fair value based upon the intention to hold all swap agreements until maturity.

The respective September 30, 1997 and 1996 values are as follows:

FINANCIAL SECTION

Notes to General Purpose Financial Statements

	<u>Notional Value</u>	<u>Book Value</u>	<u>Current Value</u>
9/30/97 (dollars in millions)	\$ 41.23	\$ 40.83	\$ 49.58
9/30/96 (dollars in millions)	29.43	29.36	32.90

Investments Exceeding 5% of Plan Net Assets

MSPRS did not hold an individual investment (other than U.S. Government securities) that exceeded 5% of net assets available for benefits at September 30, 1997 or 1996.

Securities Lending

In May 1995, GASB issued Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*. The statement established accounting and financial reporting standards for recognizing assets and liabilities arising from collateralized securities' lending transactions in which governmental entities (lenders) transfer their securities to broker-dealers and other entities (borrowers). MSPRS adopted the provisions of this standard for the year ended September 30, 1997. Comparative amounts for fiscal year 1996 have been restated to reflect this change. The effect of this change has increased the total assets and total liabilities of the System as of September 30, 1997 and 1996 by \$34,214,120 and \$18,527,760 respectively.

State statutes allow the retirement system to participate in securities lending transactions, and the retirement system has, via a Securities Lending Authorization Agreement, authorized its agent bank, State Street Bank & Trust (State Street), to lend its securities to broker-dealers and banks pursuant to a form of loan agreement.

During the fiscal year, the agent bank lent, at the direction of the retirement system, the retirement system's securities and received cash (United States and foreign currency), securities issued or guaranteed by the United States government, sovereign debt rated A or better, convertible bonds, and irrevocable bank letters of credit issued by a person other than the borrower or an affiliate of the borrower as collateral. The agent bank did not have the ability to pledge or sell collateral securities delivered absent a borrower default. Borrowers were required to deliver collateral for each loan equal to: (i) in the case of loaned securities denominated in United States dollars or whose primary trading market was located in the United States or sovereign debt issued by foreign governments, 102% of the market value of the loaned securities; and (ii) in the case of loaned securities not denominated in United States dollars or whose primary trading market was not located in the United States; 105% of the market value of the loaned securities.

The retirement system did not impose any restrictions during the fiscal year on the amount of the loans that the agent bank made on its behalf. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year. Moreover, there were no losses during the fiscal year resulting from a default of the borrowers or the agent bank. State Street is not liable for any losses unless there is negligence or willful misconduct on its part.

During the fiscal year, the retirement system and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on such loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. As of September 30, 1997, such investment pool had an average duration of 53 days and an average weighted maturity of 55 days. Because the loans were terminable at will their duration did not generally match the duration of the investments made with cash collateral. On September 30, 1997, the retirement system had no credit risk exposure to borrowers. The collateral held and the market value of securities on loan for the retirement system as of September 30, 1997, were \$34,376,131 and \$33,412,518 respectively. The types of securities included in these amounts were as follows:

<u>USD Market Value of</u>	<u>Cash</u>	<u>Securities</u>	<u>Letter of Credit</u>	<u>Total</u>
Collateral	\$ 34,214,120	\$ 152,796	\$ 9,216	\$ 34,376,131
Loaned Securities	33,257,528	148,034	6,956	33,412,518

FINANCIAL SECTION

Notes to General Purpose Financial Statements

Gross income from security lending for the fiscal year was \$1,250,729. Expenses associated with this income amounted to \$1,188,899 for the borrower's rebate and \$20,439 for fees paid to the agent.

Categories of Investment Risk

Investments made by the fund, including repurchase agreements and information concerning reverse repurchase agreements, are summarized below. The investments that are represented by specific identifiable investment securities are classified as to credit risk in three categories.

Category 1 includes investments that are insured, registered, or held by MSPRS or its agent in MSPRS' name. Category 2 includes uninsured and unregistered investments that are held by the counterpart's trust department or agent in MSPRS' name. Category 3 includes uninsured and unregistered investments that are held by the counterpart, its trust department, or agent, but not in MSPRS' name.

At September 30, 1997, all investments of the pension trust fund were classified as Category 1, except for certain investments that were not categorized.

The following table summarizes the investments:

Category 1	
Prime Commercial Paper	\$ 65,680,851
Short Term Note	16,219,082
Government Securities	121,223,813
Corporate Bonds & Notes	89,334,974
Convertible Bonds	445,147
Preferred Stock	10,890
Equities	421,676,293
Real Estate	6,538,258
Alternative Investments	2,960,611
Derivatives (International)	49,576,400
Total Category 1	\$ 773,666,318
Non-Categorized	
Private Placements	\$ 3,335,090
Mortgages	2,638,642
Real Estate	52,658,342
Alternative Investments	57,785,737
Cash Collateral	34,214,119
Securities on Loan:	
Government Securities	17,744,535
Corporate Bonds & Notes	122,125
Equities	15,390,867
Total Non-Categorized	\$ 183,889,457
Grand Total	\$ 957,555,775

As of September 30, 1996, the market value of the Category 1 and Non-categorized investments was \$607,747,859 and \$160,132,147 respectively.

FINANCIAL SECTION

Notes to General Purpose Financial Statements

NOTE 5 - COMMITMENTS AND CONTINGENCIES

Under the Administrative Procedures Act, members may appeal a decision by the Board. Once the administrative procedure has been exhausted, the decision may be appealed in Michigan's court system.

Cases and litigation pending at September 30, 1997, or filed subsequent to fiscal year end, seek reversal of a denial of retirement benefits. These cases are in the normal course of business and the retirement system does not anticipate any material loss as a result of the contingent liabilities.

Required Supplementary Information

Schedule of Funding Progress

Expressing the net assets available for benefits as a percentage of the actuarial accrued liability provides one indication of MSPRS funding status. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system. Trends in unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of MSPRS progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the system.

Retirement Benefits

Valuation Date Sept 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded (Overfunded) Accrued Liability (UAAL) (b-a)	Funded Ratio AAL (a/b)	Covered Payroll ⁽¹⁾ (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1988	\$ 393,590,100	\$ 466,076,500	\$ 72,486,400	84.4 %	\$ 82,267,361	88.1 %
1989	425,015,900	468,935,300	43,919,400	90.6	86,187,000	51.0
1990	442,932,818	506,320,250	63,387,432	87.5	88,885,729	71.3
1990 [#]	442,932,818	541,446,390	98,513,572	81.8	88,885,729	110.8
1991	468,303,512	595,180,034	126,876,522	78.7	91,626,979	138.5
1992	488,711,130	632,040,727	143,329,597	77.3	89,899,102	159.4
1992 [#]	488,711,130	644,370,241	155,659,111	75.8	89,899,102	173.1
1993	526,192,904	680,511,499	154,318,595	77.3	86,791,793	177.8
1993 ⁺	530,936,296	680,511,499	149,575,203	78.0	86,791,793	172.3
1994	566,541,199	709,298,262	142,757,063	79.9	88,623,068	161.1
1994 [*]	566,541,199	711,840,905	145,299,706	79.6	88,623,068	164.0
1995	622,625,951	798,820,493	176,194,542	77.9	104,500,048	168.6
1996	697,922,641	823,461,255	125,538,614	84.8	106,826,290	117.5
1997	787,239,852	880,325,872	93,086,020	89.4	110,085,690	84.6

⁽¹⁾ Based on entry age normal actuarial method.

[#] Benefits amended.

⁺ Revised asset valuation method

^{*} Assumption Change

**Required Supplementary Information
(Continued)**

**Schedule of Employer Contributions
(Amounts in Thousands)**

Fiscal Year Ending Sept. 30	Annual Required Contribution (ARC)	Percentage Contributed
1988	\$ 16,387,658	86.0 %
1989	17,106,748	94.6
1990	18,214,516	93.9
1991	23,045,761	96.1
1992	23,277,902	88.3
1993	23,909,930	85.2
1994	23,768,031	98.3
1995	24,353,043	102.8
1995 ⁽¹⁾	27,916,677	89.7
1996	35,149,438	102.4
1997	30,821,696	114.0

⁽¹⁾ Changes in actuarial assumptions.

Notes to Required Supplemental Information

NOTE A - DESCRIPTION

Ten year historical trend information designed to provide information about MSPRS progress made in accumulating sufficient assets to pay benefits when due is presented in the preceeding schedules. Other ten year historical trend information related to the pension plan is presented in the statistical and actuarial sections of the report. This information is presented to enable the reader to assess the progress made by MSPRS in accumulating sufficient assets to pay pension benefits as they become due.

The comparability of trend information is affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, accounting policies, and other changes. Those changes usually affect trends in contribution requirements and in ratios that use the pension benefit obligation as a factor.

The Schedule of Funding Progress and Schedule of Employer Contributions are reported as historical trend information. The Schedule of Finding Progress is presented to measure the progress being made to accumulate sufficient assets to pay benefits when due. The Schedule of Employer Contributions is presented to show the responsibility of the Employer in meeting the actuarial requirements to maintain the retirement system on a sound financial basis.

NOTE B - SUMMARY OF ACTUARIAL ASSUMPTIONS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

Valuation Date	09/30/97
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent Closed
Remaining Amortization Period	39 Remaining
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return	8%
Projected Salary Increases	3 - 15%
Includes Inflation at	5%
Cost-of-Living Adjustments	2% annual non-compounded with maximum annual increase of \$500

FINANCIAL SECTION

Supporting Schedules

Comparative Summary Schedule of Pension Plan Administrative Expenses for the Year Ending September 30, 1997 and 1996

	<u>1997</u>	<u>1996</u>
Personnel Service:		
Staff salaries	\$ 43,350	\$ 27,787
Retirement and social security	9,479	6,524
Other fringe benefits	<u>3,853</u>	<u>4,886</u>
Total	<u>56,682</u>	<u>39,197</u>
Professional Services:		
Actuarial	37,008	36,000
Accounting, records management and mail	10,119	73,261
Data processing	7,710	9,649
Attorney general	19,740	29,175
Audit	25,200	25,200
Medical	<u>1,813</u>	<u>0</u>
Total	<u>101,590</u>	<u>173,285</u>
Building and Equipment:		
Building rentals	<u>14,520</u>	<u>5,790</u>
Total	<u>14,520</u>	<u>5,790</u>
Miscellaneous:		
Customer Information Center	881	0
Office administrative support	2,502	18,564
Department administrative support	8,716	21,074
Travel and board meetings	227	575
Postage, telephone and other	<u>17,709</u>	<u>10,520</u>
Total	<u>30,035</u>	<u>50,733</u>
Total Administrative Expenses	<u>\$ 202,827</u>	<u>\$ 269,005</u>

Supporting Schedules (continued)

Schedule of Investment Expenses

	<u>1997</u>	<u>1996</u>
Securities Lending Expense	\$ 1,209,338	\$ 852,255
Real Estate Operating Expense	32,091	174,465
Other Investment Expenses	<u>215,894</u>	<u>163,940</u>
Total Investment Expenses	<u><u>\$ 1,457,323</u></u>	<u><u>\$ 1,190,660</u></u>

Payments to Consultants

	<u>1997</u>	<u>1996</u>
Auditor General	\$ 25,200	\$ 25,200
Attorney General	19,740	29,175
Medical Advisor	1,813	0
Actuary	<u>37,008</u>	<u>36,000</u>
Total Payment to Consultants	<u><u>\$ 83,761</u></u>	<u><u>\$ 90,375</u></u>

FINANCIAL SECTION

Supporting Schedules (continued)

Detail of Changes in Plan Net Assets (Pension and Postemployment Healthcare Benefits)

	For Year Ending September 30, 1997					
	<u>Employee Contributions</u>	<u>Employer's Contributions</u>	<u>Retired Benefits Payments</u>	<u>Undistributed Investment Income</u>	<u>Health Related Benefits</u>	<u>Total</u>
Additions:						
Members contributions:						
Other	\$67,750					\$67,750
Military	164					164
Employer contributions		\$34,785,548			\$17,066,083	51,851,631
Investment income:						
Investment income				\$177,442,436		177,442,436
Securites lending income				1,250,729		1,250,729
Less investment expenses						
Real estate operating expenses				(32,091)		(32,091)
Securities lending expenses				(1,209,338)		(1,209,338)
Other investment expenses				(215,894)		(215,894)
Miscellaneous income				50		50
Total additions	<u>67,914</u>	<u>34,785,548</u>		<u>177,235,892</u>	<u>17,066,083</u>	<u>229,155,437</u>
Deductions:						
Benefits paid to plan members and beneficiaries						
Retirement benefits			\$43,318,234			43,318,234
Health benefits					9,956,586	9,956,586
Dental/vision benefits					992,690	992,690
Administrative expenses				202,828		202,828
Total deductions			<u>43,318,234</u>	<u>202,828</u>	<u>10,949,276</u>	<u>54,470,338</u>
Net Increase (Decrease)	67,913	34,785,548	(43,318,234)	177,033,065	6,116,807	174,685,099
Other Changes in Net Assets:						
Interest allocation	32,402	11,712,311	35,119,682	(46,971,508)	107,113	
Transfers upon retirements	(436,314)		436,314			
Transfers of employer shares		(42,515,026)	42,515,026			
Total other changes in net assets	<u>(403,912)</u>	<u>(30,802,715)</u>	<u>78,071,022</u>	<u>(46,971,508)</u>	<u>107,113</u>	
Net Increase (Decrease) After Other Changes	(335,999)	3,982,833	34,752,788	130,061,557	6,223,920	174,685,099
Net Assets Held in Trust for Pension and Healthcare Benefits:						
Beginning of Year	<u>1,472,070</u>	<u>205,056,290</u>	<u>492,561,217</u>	<u>62,186,835</u>	<u>(1,911,738)</u>	<u>759,364,674</u>
End of Year	<u>\$ 1,136,071</u>	<u>\$209,039,123</u>	<u>\$527,314,005</u>	<u>\$192,248,392</u>	<u>\$4,312,182</u>	<u>\$934,049,773</u>

FINANCIAL SECTION

For Year Ending September 30, 1996					
<u>Employee Contributions</u>	<u>Employer's Contributions</u>	<u>Retired Benefits Payments</u>	<u>Undistributed Investment Income</u>	<u>Health Related Benefits</u>	<u>Total</u>
\$76,743					\$76,743
	\$35,994,833			\$17,140,809	53,135,642
			\$101,100,709		101,100,709
			881,925		881,925
			(174,465)		(174,465)
			(852,255)		(852,255)
			(163,940)		(163,940)
			6		6
<u>76,743</u>	<u>35,994,833</u>		<u>100,791,980</u>	<u>17,140,809</u>	<u>154,004,365</u>
		\$38,278,890			38,278,890
				9,454,133	9,454,133
				1,062,486	1,062,486
			269,005		269,005
		<u>38,278,890</u>	<u>269,005</u>	<u>10,516,619</u>	<u>49,064,514</u>
76,743	35,994,833	(38,278,890)	100,522,975	6,624,190	104,939,851
45,340	11,532,295	32,353,767	(43,931,402)		
(435,453)		435,453			
	(33,678,095)	33,678,095			
(390,113)	(22,145,800)	66,467,315	(43,931,402)		
(313,370)	13,849,033	28,188,425	56,591,573	6,624,190	104,939,851
<u>1,785,440</u>	<u>191,207,257</u>	<u>464,372,792</u>	<u>5,595,262</u>	<u>(8,535,928)</u>	<u>654,424,823</u>
<u>\$1,472,070</u>	<u>\$205,056,290</u>	<u>\$492,561,217</u>	<u>\$62,186,835</u>	<u>\$(1,911,738)</u>	<u>\$759,364,674</u>

INVESTMENT SECTION

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INVESTMENT SECTION



MSPRS

INVESTMENT SECTION

Report on Investment Activity

INVESTMENT POLICY GOAL

The function of the MPSRS is to provide retirement, survivor and disability benefits to its members. The State Treasurer is the sole investment fiduciary and custodian of the System's investments pursuant to State law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment rate of return, at a reasonable cost achieved by cultivating a motivated team of dedicated professionals.

STATE LAW

Pursuant to State Law (Section 91 of Act No. 380 of the Public Acts of 1965, as amended), the State Treasurer, State of Michigan, is the investment fiduciary for the following four State sponsored retirement systems: Michigan Public School Employees' Retirement System; Michigan State Employees' Retirement System; Michigan State Police Retirement System; and Judges' Retirement System.

The aforementioned State Law created an Investment Advisory Committee comprised of the Director of the Department of Consumer & Industry Services, the Director of the Department of Management & Budget, or their duly authorized representatives, and three public members appointed by the Governor with the advice and consent of the Senate. The committee meets quarterly and reviews investments, goals, and objectives, and may submit recommendations to the State Treasurer. The Investment Advisory Committee may also, by a majority vote, direct the State Treasurer to dispose of any holdings which, in the committee's judgement, are not suitable for the funds involved, and may, by unanimous vote, direct the State Treasurer to make specific investments.

Act No. 314 of the Public Act of 1965, as amended, authorizes the investment of assets of public employee retirement systems or plans created and established by the state or any political subdivision.

PROXY VOTING POLICY

The MSPRS Proxy Voting Policy sets forth directives on the following issues: Board of Directors, Corporate Governance, and Social Issues, corporate restructurings and defenses. All proxies are reviewed and voted in accordance with the above mentioned items.

INVESTMENT RESULTS

Total Portfolio Result

For the fiscal year ended September 30, 1997, the total portfolio returned 23.6%, compared to the SEI Median Fund return of 22.7%. For the three year period the fund returned 18.6% and for the five year period the fund returned 13.8%. This compares with the median fund return of 17.2% for the three year period and 13.2% for the five year period.

During the fiscal year ending September 30, 1997, the nation's economy was characterized by full employment, low inflation, stable interest rates and moderate economic growth. The equity market again experienced excellent returns as the S&P 500 returned 40.5% with the Dow Jones Industrial Average returning 37.7%. With a relatively stable interest rate environment, the Lehman Bros Government/Corporate bond index experienced a return of 9.6% and the Salomons Brother Broad Grade Index experienced a return of 9.7%.

The returns were calculated using a time-weighted rate of return in accordance with standards of the Association for Investment Management and Research (AIMR) unless a modification is described in the discussion of the return.

Domestic Stocks

Domestic stock returns rose in fiscal year 1997 due to continued improvement in inflation coupled with rising corporate profitability. During this period, the domestic portfolio returned 39.7% compared with a return of 40.5% for the S&P 500 and a

INVESTMENT SECTION

Report on Investment Activity

37.7% return for the Dow Jones Industrial Average. For the most recent 1 year period, the market was paced by a 61.6% return on technology stocks followed by a 57.4% return on the financials and a 46.7% return on the energy sector.

Domestic equities currently represent 47.2% of the total portfolio with 36.7% of the total portfolio managed actively and 10.5% indexed. This compares with domestic equity exposure of 43.5% in 1995 and 35.8% in 1993.

International Equities

Passive exposure to international equity returns is achieved by investing in a combination of fixed income notes and equity swap agreements on foreign stock indices in developed markets. Interest on the dedicated notes is exchanged for international stock index returns, and the notional amount of the equity swap agreements is held in the approximate proportions of the Salomon BMI-EPAC country weightings for the larger component countries. The passive investment program using swap agreements was established in 1993. During 1997, \$12 million was invested in the combination structure, bringing international equity investments to 5.3% of the total fund.

The benchmark used to evaluate international equity returns is a custom version of the Salomon Broad Market Index (BMI) Europe and Pacific Composite (EPAC) adjusted for net dividends. Fifty percent of the benchmark return is hedged to the U.S. dollar and the other 50% is impacted by local currency exchange rate changes. The composite international equity return of 18.1% in 1997, compared favorably with the Salomon BMI-EPAC return of 16.7%. The composite international equity return of 13.3% for 3 years, compared well with the Salomon BMI-EPAC return of 11.3% over the same period.

Fixed Income (Excluding Mortgages)

For the fiscal year ending September 30, 1997, 25.1% of the portfolio was invested in fixed income compared to 27.3% and 30.9% for the fiscal year ended 1995 and 1993 respectively. Two factors hampered the effort to achieve the thirty percent guideline. The asset allocation objective is to invest 30% of the total portfolio in fixed income.

With the decline in interest rates during the year, there was a substantial increase in the number of issues called. In addition, the continued dramatic growth in equity prices facilitated a further increase in the portfolio market value. While fixed income holdings grew by almost \$20.9 million in real terms during fiscal 1997, the relative proportion of the total portfolio remained constant due to the significant number of issues called and the overall increase in the fund's market value.

As the year progressed, rates declined and quality and maturity spreads narrowed. The fixed income focus was, therefore, on higher grade, shorter maturity issues. Even with the more defensive posture, the fixed income segment for bonds achieved a 10.3% return compared with a 9.7% return for the Salomon Brothers Broad Grade Index. This return ranked in the 27th percentile of the broad SEI universe. The three year compound rate was 10.3% compared to 9.5% for the index and a 15th percentile ranking. For five years the rates were 7.6% and 7.0% for a 23rd percentile ranking.

Real Estate Equity

As of the year ending September 30, 1997, 6.4% of the total net assets were invested in equity real estate. This compares to 6.7% and 5.9% for the fiscal years ending September 30, 1995 and 1993, respectively. The asset allocation objective is to invest 7.5% of the total net assets in equity real estate. Due to the growth of the total pension fund size during the year, certain opportunistic timing of property sales and the receipt of funds from financed properties, the percentage of total equity real estate did not materially change from the 1995 levels.

The one-year, three-year and five-year total equity real estate net returns for the fiscal year ending September 30, 1997, were 14.8%, 11.0% and 5.9%, respectively. This compares to the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index returns of 10.9%, 9.3% and 6.1% relating to the same time periods.

The real estate investments are broadly diversified geographically, across the country, and by type of property to reduce risk. The properties are regularly valued by independent appraisers to establish market values. The market values established by

INVESTMENT SECTION

Report on Investment Activity

the appraisers are utilized in computing the real estate portfolio appreciation return. The appreciation return coupled with the income return produced from the real estate holdings are utilized to derive the equity real estate portfolio total return.

Real Estate Debt (Mortgages)

As of the year ending September 30, 1997, 0.3% of the total net assets were invested in mortgages. This compares to 3.5% and 4.2% for the fiscal years ending September 30, 1995 and 1993, respectively. The asset allocation objective is to reduce its mortgage holdings to zero percent over time.

The one-year, three-year and five-year total returns for the mortgage portfolio, for the fiscal year ending September 30, 1997, were 4.5%, 7.7% and 7.2%, respectively. This compares to Salomon Brothers Broad Grade Index returns of 9.7%, 9.5% and 7.0% relating to the same time periods. Since the majority of the mortgage portfolio is federally insured mortgages, the returns generated by the mortgage portfolio are normally expected to be less than the index.

During the year, the majority of the mortgage portfolio was sold to take advantage of the favorable low interest rate environment the economy enjoyed and the resulting premium prices for the mortgages. The sale of the mortgages resulted in realized gains to the portfolio. Current mortgage holdings are mostly comprised of federally insured multifamily mortgages and a few multi-tenant commercial office buildings. The mortgage portfolio is geographically dispersed across the country and by property type to reduce risk. Mortgages are valued monthly based upon quotes obtained from Wall Street brokerage houses that buy and sell mortgages.

Alternative Investments Division

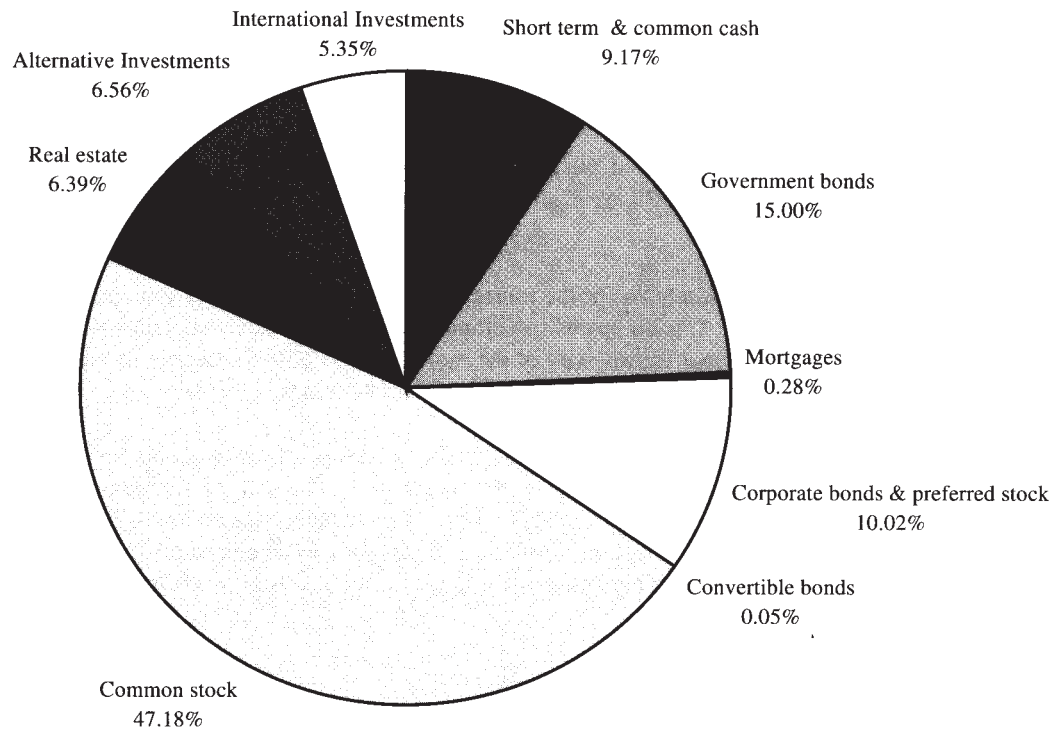
Alternative investments are investments in private equities. Through September 30, 1997, approximately 90% of those investments were made through limited partnerships. Of the investments in limited partnerships, approximately 7% were in partnerships that invest internationally. The remaining 10 percent were direct private equity investments and public stock distributions received from the limited partnerships. The percentage of assets in alternative investments has consistently increased since 1993. As of September 30, 1997, 1995, and 1993, 6.6%, 6.0% and 4.7%, respectively, of total net assets were invested in alternative investments. The desired asset allocation for alternative investments for fiscal year 1997 was 7.5%. Due to the growth of the total pension fund's size during the year and the return of capital gains by the limited partnerships, the Alternative Investments Division was not able to meet this allocation target.

The one-year, three-year and five-year total alternative investments returns for the fiscal year ending September 30, 1997, were 16.5%, 21.9%, and 18.9%, respectively.

INVESTMENT SECTION

Report on Investment Activity

Asset Allocation



Investment Results Periods Ending September 30, 1997

Investment Category	Current Year	Annualized Rate of Return	
		3 Years	5 Years
Total Portfolio	23.6 %	18.6 %	13.8 %
Median	22.7	17.2	13.2
Domestic Equities Stock - Active/Convertible	39.7	28.6	21.9
Domestic Equities Stock - Passive	40.0	29.9	21.3
Standard & Poor's (S&P 500)	40.5	29.9	20.8
International Equities	18.1	13.3	N/A
Net Salomon BMI - EPAC 50/50	16.7	11.3	N/A
Fixed Income Bonds (U.S. Corp and Govt)	10.3	10.3	7.6
Salomon Brothers Broad Grade Index	9.7	9.5	7.0
Real Estate - Debt	4.5	7.7	7.2
Salomon Brothers Broad Grade Index	9.7	9.5	7.0
Real Estate - Equity	14.8	11.0	5.9
NCREIF	10.9	9.3	6.1
Alternative Investments	16.5	21.9	18.9

INVESTMENT SECTION

Report on Investment Activity

Largest Assets Held

Largest Stock Holdings September 30, 1997

<u>Rank</u>	<u>Shares</u>	<u>Stocks</u>	<u>Market Value</u>
1	203,598	General Electric Corporation	\$ 13,857,491
2	79,851	Citicorp	10,695,083
3	77,704	Microsoft Corporation	10,281,249
4	133,640	Compaq Computer Corporation	9,989,590
5	101,836	Schlumberger Limited	8,573,369
6	88,368	Amco Corporation	8,516,466
7	177,793	McDonald's Corporation	8,467,392
8	229,100	Chrysler Corporation	8,433,858
9	202,354	Phillip Morris Companies Inc	8,410,439
10	68,927	Chase Manhattan Corporation	8,133,386

Largest Bond Holdings September 30, 1997

<u>Rank</u>	<u>Par Amount</u>	<u>Bonds & Notes</u>	<u>Market Value</u>
1	\$ 7,957,000	U.S. Treasury Bonds at 9.125% Due 5-15-2009	\$ 9,185,322
2	9,863,700	U.S. Treasury 0% Callable Principle Due 11-15-2011	5,613,826
3	4,620,000	Morgan, J.P. FRN Due 3-13-2000	4,498,725
4	7,393,310	U.S. Treasury 0% Callable Principle Due 5-15-2011	4,345,270
5	2,541,000	U.S. Treasury 7.25% Due 5-15-2016	2,759,755
6	3,685,000	U.S. Treasury Tiger 14 0% Due 8-15-2004	2,416,512
7	2,310,000	FHLMC - Global 6.55% Due 11-13-2001	2,304,941
8	2,310,000	GMAC FRN Due 2-15-2000	2,298,935
9	2,310,000	First Union Corporation FRN Due 7-22-2003	2,298,450
10	2,310,000	FHLMC Debenture 6.51% Due 12-10-2001	2,288,217

A complete list of stock and bond holdings is available from the Michigan Department of Treasury.

INVESTMENT SECTION

Report on Investment Activity

Schedule of Investment Advisors & Commissions

The State Treasurer is the investment fiduciary and custodian of the retirement system's funds pursuant to state law. Outside advisors are utilized to augment the State Treasurer's internal staff in the real estate and alternative investment markets. Only 6.7% of the total investment portfolio is managed by fully discretionary outside advisors. Outside advisor's fees are netted against the partnership or trust fund income. The Michigan Department of Treasury's cost of operations applicable to the retirement system for the fiscal year amounted to \$153 thousand or less than two basis points (.02%) of the average fair market value of the portfolio.

State law created an Investment Advisory Committee comprised of the directors of the Departments of Consumer and Industry Services and Management and Budget, or their duly authorized representatives, and three public members appointed by the Governor with the advice and consent of the Senate. The public members serve without pay, but are paid actual and necessary travel and other expenses. The committee meets quarterly to review investments, goals and objectives and may submit recommendations to the State Treasurer. The committee may also, by a majority vote, direct the State Treasurer to dispose of any holding which in the committee's judgment is not suitable for the fund involved, and may by unanimous vote direct the State Treasurer to make specific investments.

Schedule of Investment Advisors

	Assets Under Management at 9-30-97 (At Market)
Alternative Investments	
Kohlberg, Kravis & Roberts	\$ 24,692,565
Hicks, Muse, Tate & Furst Inc.	4,509,779
Warburg, Pincus Counselors	1,984,745
Equity Institutional Investors, Inc.	1,705,805
Hancock Venture Partners	1,316,574
TPG Partners, L.P.	1,299,130
The Carlyle Group	949,856
Leonard Green & Partners, L.P.	869,325
The Foothill Groups	853,995
Kelso & Company	774,755
DLJ Merchant Banking Inc.	765,115
Accel Partners	757,939
Cypress Merchant Banking Partners	741,260
CIE Management II Limited	737,572
Advent International Corporation	708,681
Berkshire Parnters	696,583
Healthcare Investment Corporation	664,424
Menlo Ventures	556,499
Alternative Investments representing less than .06% of plan net assets	10,126,026
Total Alternative Investments	\$ 54,710,628
Real Estate	
Raymond James Realty Advisors*	\$ 14,453,162
Equitable Realty Portfolio Management*	7,981,059
L & B Real Estate Counsel*	5,576,953
Kensington Realty Advisors*	4,775,574
Aldrich, Eastman & Waltch, Inc.	3,669,019
KOLL Investment Management (dba KB Realty Advisors)*	2,341,551
Sentinel Realty Advisors	2,055,623
John Hancock Timber Resource Group	1,108,233
Real Estate representing less than .12% of plan net assets	2,707,724
Total Real Estate	\$ 44,668,898
GRAND TOTAL	\$ 99,379,526

* Advisor does not have full discretion

INVESTMENT SECTION

Report on Investment Activity

Schedule of Investment Advisors & Commissions (continued)

Schedule of Commissions

	Number of Share Traded	Commissions Paid Fiscal Year Ended 9-30-97 ⁽¹⁾	Commissions per Shares
Investment Performance Measurement Consultant:			
SEI Capital Resources Company (Directed brokerage included below)	18,792	\$ 1,127	0.06
Investment Brokerage Firms:			
Paine Webber	270,879	\$ 15,491	0.06
Bear Stearns	258,423	14,634	0.06
Salomon Brothers	219,083	11,908	0.05
Merrill Lynch	168,640	9,948	0.06
Morgan Stanley	125,803	7,274	0.06
Capital Inst. Service	111,998	6,720	0.06
Shroeder-Wertheim	103,670	5,975	0.06
Bernstein, Sanford	96,697	5,847	0.06
Smith Barney	96,453	5,695	0.06
Cowen & Company	94,587	5,663	0.06
Prudential Bache	87,568	4,984	0.06
First Boston	83,236	4,736	0.06
Bridge Trading Company	78,457	4,707	0.06
Donaldson, Lufkin	81,389	4,519	0.06
Goldman Sachs	79,018	4,371	0.06
Lehman	72,190	4,324	0.06
Citation	70,559	4,234	0.06
S & P Securities	66,403	3,984	0.06
Oppenheimer & Company	51,622	3,097	0.06
Wilshire Associates	48,422	2,905	0.06
Everen Securities	50,538	2,812	0.06
Deutch/Morgan/Greenfell	43,093	2,394	0.06
Witter, Dean/Reynolds	39,516	2,252	0.06
Cantor Fitzgerald	53,365	2,236	0.04
Montgomery Securities	28,676	1,647	0.06
Subtotal (25 highest)	2,480,285	\$ 142,357	0.06 ⁽²⁾
All Other Brokerage Firms	182,228	10,808	0.06 ⁽³⁾
Total	2,662,513	\$ 153,165	0.06 ⁽⁴⁾

⁽¹⁾ These amounts are included in purchase and sale prices of investments.

⁽²⁾ The average commission rate per share for the top 25 brokerage firms.

⁽³⁾ The average commission rate per share for all other brokerage firms, excluding the top 25 brokerage firm.

⁽⁴⁾ The average commission rate per share for all brokerage firms.

INVESTMENT SECTION

Report on Investment Activity

Investment Summary

	1997		1996	
	<u>Market Value*</u>	<u>Percent of Total Market Value</u>	<u>Market Value*</u>	<u>Percent of Total Market Value</u>
Fixed Income:				
Government Bonds	\$ 138,968,344	15.00 %	\$ 116,217,549	15.45 %
Corporate Bonds & Preferred Stocks	92,802,958	10.02	94,624,476	12.58
Convertible Bonds	445,147	0.05	427,295	0.06
Mortgages	2,638,763	0.28	22,734,274	3.02
Total Fixed Income	<u>\$ 234,855,212</u>	<u>25.35 %</u>	<u>\$ 234,003,594</u>	<u>31.11 %</u>
Common Stocks	437,067,164	47.18	336,210,546	44.70
Real Estate	59,196,600	6.39	48,334,395	6.43
Alternative	60,746,348	6.56	53,058,276	7.05
International Equity	49,576,400	5.35	32,904,320	4.38
Short-Term Investments**	<u>85,000,525</u>	<u>9.17</u>	<u>47,625,975</u>	<u>6.33</u>
Total	<u><u>\$ 926,442,249</u></u>	<u><u>100.00 %</u></u>	<u><u>\$ 752,137,106</u></u>	<u><u>100.00 %</u></u>

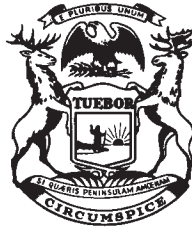
* Amounts do not include non-cash collateral on loaned securities. Short term investments are at cost, which approximates market.

** Includes equity in the State Treasurer's Common Cash Fund, but excludes amounts payable and receivable for sales and purchases of securities with a settlement date after September 30 for each fiscal year. Amount also excludes \$34,214,120 and \$18,527,760 in collateral for security lending for fiscal year 1997 and 1996 respectively.

Michigan State Police Retirement System

**Comprehensive Annual Financial Report
for the Fiscal Year Ended September 30, 1997**

**ACTUARIAL
SECTION**



MSPRS

Actuary's Certification

THE SEGAL COMPANY

One Park Avenue
New York, New York
10016-5895
212-251-5321
FAX: 212-251-5490

Michael J. Karlin, F.S.A., M.A.A.A.
Senior Vice President & Actuary

March 2, 1998

Ms. Janet E. Phipps
Director
Department of Management and Budget
and
Retirement Board
Michigan State Police Retirement System
P.O. Box 30176
Lansing, Michigan 48909

Ladies and Gentlemen:

The Michigan State Police Retirement System (MSPRS) is funded on an actuarial reserve basis. The basic financial objective of MSPRS is to establish and receive contributions that remain approximately level as a percentage of active member payroll over a long period of years.

Actuarial valuations are prepared annually to determine MSPRS's actuarial liabilities and the employer contributions required to fund the System in accordance with the actuarial reserve funding provisions of the governing State Statute. The most recent actuarial valuation as of September 30, 1997 included a total of 4,151 members of MSPRS. The actuarial value of MSPRS's assets amounted to approximately \$787 million on September 30, 1997. The actuarial assumptions used in the 1997 valuation are the same as those used in the previous annual actuarial valuation. These assumptions produce valuation results which we consider to be reasonably indicative of the plan's underlying cost.

Our actuarial valuation of MSPRS as of September 30, 1997 was performed by qualified actuaries in accordance with accepted actuarial procedures. In our opinion, the calculated contribution rate meets the fundamental objectives of State law. Based on the 1997 valuation results, it is also our opinion that the Michigan State Police Retirement System continues in sound condition, in accordance with actuarial principles of level cost financing.

Sincerely,



Michael Karlin, F.S.A., M.A.A.A.
Senior Vice President & Actuary

Summary of Actuarial Assumptions and Methods

1. The investment return rate used in making the valuations was 8% per year, compounded annually. This rate of return is not the assumed real rate of return. Considering other financial assumptions, this 8% investment return rate translates to an assumed real rate of return of 5% for 5 years and 3% thereafter. Adopted 1994.
2. The mortality table used in evaluating allowances to be paid was the 1983 Group Annuity Mortality Table, set forward one year for men and 2 years for women. Adopted 1994.
3. Sample probabilities of retirement with an age and service allowance are shown in Schedule I on page 42. Adopted 1994.
4. Sample probabilities of withdrawal from service and disability, together with individual pay increase assumptions, are shown in Schedule II on page 42.
5. Total active member payroll is assumed to increase 3% per year for the next 5 years, beginning October 1, 1994, and 5% thereafter. This represents the portion of the individual pay increase assumptions attributable to inflation. In effect, this assumes no change in the number of active members. Adopted 1994.
6. An individual entry age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Unfunded actuarial accrued liabilities, including actuarial gains and losses, are financed over a declining period of 50 years, beginning October 1, 1986.
7. Valuation assets (cash and investment) were valued using a five year smoothed market value method. For the 1993 valuation and later, the excess (shortfall) of actual investment income (including interest, dividends, realized and unrealized gains or losses) over the imputed income at the valuation interest rate is considered the gain (loss), which is spread over five years. Adopted 1993.
8. The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.
9. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods

SCHEDULE 1

Percent of Eligible Active Members Retiring Within Next Year

<u>Retirement Ages</u>	<u>Percent of Eligible Active Members Retiring Within Next Year</u>
44-47	10 %
48-63	30
64 and over	100

SCHEDULE 2

Separation From Active Employment Before Age & Service Retirement & Individual Pay Increase Assumptions

<u>Sample Ages</u>	<u>Years Service</u>	<u>Percent of Active Members Withdrawing Within Next Year (Men and Women)</u>	<u>Percent of Active Members Becoming Disabled Within Next Year</u>	<u>Percent Increase In Pay During Next Year</u>
All	0	8.00 %		
	1	3.00		
20	2 & Over	2.00	0.04 %	13.00 %
25	"	2.00	0.06	12.81
30	"	1.50	0.17	8.10
35	"	0.60	0.19	5.45
40	"	0.35	0.24	4.24
45	"	0.35	0.44	3.89
50	"		1.15	3.86
55	"		1.25	3.68
60	"		1.45	3.00

Actuarial Valuation Data

Schedule of Active Member Valuation Data*

Valuation Date Sept. 30	Number	Reported Annual Payroll	Average Annual Pay	% Increase	Average Age	Average Service
1987	2,180	\$ 78,888,600	\$ 36,200	(1.4) %	38.8 years	15.3 years
1989	2,238	86,187,000	38,511	6.4	38.7	14.9
1990	2,255	88,885,729	39,417	2.4	38.6	14.9
1991	2,139	91,626,979	42,836	8.7	39.2	15.4
1992	1,985	89,899,102	45,289	5.7	39.4	15.3
1993	1,885	86,791,793	46,043	1.7	39.9	15.1
1994	1,992	88,623,068	44,490	(3.4)	38.8	13.4
1995	2,181	104,500,048	47,914	7.7	37.9	13.0
1996	2,135	106,826,272	50,036	4.4	38.2	13.1
1997	2,090	110,085,960	52,673	5.3	38.2	12.9

* Beginning with 09-30-90 fiscal year end, actuarial valuations are being completed annually.

Retirant and Beneficiary Data* Rolls End of Year

Year Ended Sept. 30	Number			Average Monthly Benefit			Average Age		
	Pensioners	Widows	Children	Pensioners	Widows	Children	Pensioners	Widows	Children
1987	852	221	6	1,179	797	10	61.0	65.1	13.0
1989	967	230	5	1,393	850	100	61.1	66.1	14.1
1990	1,050	246	3	1,426	847	100	61.2	66.2	13.5
1991	1,142	263	3	1,510	854	100	60.8	66.6	13.4
1992	1,267	281	3	1,620	868	100	60.4	66.6	14.4
1993	1,357	282	3	1,697	879	100	60.4	66.7	15.3
1994	1,483	273	3	1,721	938	100	60.5	69.5	16.4
1995	1,548	279	4	1,770	962	100	60.8	69.6	14.8
1996	1,612	397	6	1,845	1,001	100	61.6	69.3	10.3
1997	1,703	310	5	1,963	1,192	419	62.5	70.4	10.7

* Beginning with 09/30/90 fiscal year end, actuarial valuations are being completed annually.

Prioritized Solvency Test

The MSPRS funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the system are level in concept and soundly executed, the system will pay all promised benefits when due -- the ultimate test of financial soundness. Testing for level contribution rates is the long term solvency test.

A prioritized solvency test is another means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: (1) active member contributions on deposit; (2) the liabilities for future benefits to present retired lives; and (3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) is normally partially covered by the remainder of present assets. Generally, if the system has been using level-cost financing, the funded portion of liability 3 will increase over time. Liability 3 being fully funded is not necessarily a byproduct of level percent of payroll funding methods.

The schedule below illustrates the history of the liabilities of the system and is indicative of the MSPRS policy of following the discipline of level percent of payroll financing.

Valuation Date Sept. 30	Actuarial Present Value of Credited Projected Benefits For® (\$ in Thousands)				Portion of Present Value Covered by Assets			
	(1)	(2)	(3)	Valuation Assets	(1)	(2)	(3)	(4)**
	Active Member Contributions	Retirants and Beneficiaries	Active Members (Employer Financed Portion)					
1987#	\$ 5,000	\$ 147,933	\$ 263,019	\$ 375,507	100 %	100 %	84.9 %	90.4 %
1989	3,713	187,986	273,775	425,016	100	100	85.2	91.3
1990	3,256	213,228	302,934	442,933	100	100	74.8	
1990#	3,256	313,228	335,935	442,933	100	100	67.4	80.2
1991	2,747	251,716	350,883	468,304	100	100	60.9	77.4
1992	2,127	301,927	338,103	488,711	100	100	54.6	74.7
1993	2,133	330,629	340,941	526,193	100	100	56.7	78.2
1993+	2,133	330,629	340,941	530,936	100	100	58.1	78.8
1994	1,770	370,681	331,391	566,541	100	100	58.6	80.5
1994*	1,770	394,292	310,620	566,541	100	100	54.9	80.2
1995	1,497	422,960	374,148	622,626	100	100	53.0	78.0
1996	1,183	459,985	362,214	697,923	100	100	65.4	84.8
1997	847	516,379	363,100	787,240	100	100	74.4	89.4

* Revised actuarial assumptions.

@ Beginning with 09/30/90 fiscal year end, actuarial valuations are being completed annually.

Benefits amended.

+ Revised asset valuation method.

** Percents funded on a total valuation asset and total Credited Projected Benefits basis.

Summary Of Plan Provisions

Our actuarial valuation of MSPRS as of September 30, 1997 is based on the present provisions of Public Act 182 of 1986, as amended.

Regular Retirement

Eligibility — 25 years of credited service with no age requirement; or age 50 with 10 years credited service.

Annual Amount — If member has 25 or more years of credited service, 60% of final average compensation; if member has less than 25 years of credited service, total credited service time 2% of final average compensation.

Type of Final Annual Compensation — Average of 2 final years.

Early Retirement

None.

Deferred Retirement (vested benefit)

Eligibility — 10 years of credited service. Benefit commences at age 50.

Annual Amount — Computed as Regular Retirement benefit based on credited service and final average compensation at termination.

Duty-Disability Retirement

Eligibility — No age or service requirement.

Annual Amount — 60% of final average compensation. Disability benefit plus workers' compensation benefit, if any, shall not exceed 100% of final average compensation.

Non-Duty Disability Retirement

Eligibility — 10 years of credited service.

Annual Amount — 2.4% of final average compensation times years of credited service, to a maximum of 60% of final average compensation.

Duty Death Before Retirement

Eligibility — No age or service requirement

Annual Amount — 60% of final average compensation is payable to surviving spouse; additional \$1200 per year for each child under 18 is also payable. If no surviving spouse, children under 18 share in 60% benefit until attainment of age 18. If no spouse or children, dependent parents are eligible for 60% benefit (plus \$1200 per dependent sibling under 18). Retirement benefit plus workers' compensation, if any shall not exceed 100% of final average compensation.

Lump Sum Payment — A \$1,500 funeral benefit is also payable.

ACTUARIAL SECTION

Summary Of Plan Provisions (continued)

Non Duty Death Before Retirement

Eligibility — 10 years of credited service.

Annual Amount — 2.4% of final average compensation times years of credited service, to a maximum of 60% of final average compensation, payable to surviving spouse. If no surviving spouse, children under 18 share in benefit until attainment of age 18.

Death After Retirement

The retired member's benefit continues to the surviving spouse. If no surviving spouse, children under 18 share in the continued benefit until attainment of age 18.

Post-Retirement Cost-of-Living Adjustments

All members retiring (or leaving employment with vested benefits) on or after October 1, 1991 (Troopers and Sergeants - October 1, 1989), and their survivors, are eligible for automatic 2% annual (non-compounded) benefit increases, with a maximum annual increase of \$500.

Post - Retirement Health Insurance Coverage

Persons in receipt of retirement allowances, and their dependents, are eligible for 95% State-paid health insurance coverage and 90% State-paid dental and vision insurance.

Member Contributions

None.

Michigan State Police Retirement System

**Comprehensive Annual Financial Report
for the Fiscal Year Ended September 30, 1997**

**STATISTICAL
SECTION**



MSPRS

STATISTICAL SECTION

Schedule of Revenues by Source

Fiscal Year Ended Sept. 30	Member Contributions	Employer Contributions		Net Investment & Other Income	Total
		Dollars	% of Annual Covered Payroll		
1988	\$ 33,450	\$ 16,563,621	N/A	\$ (8,177,445)	\$ 8,419,626
1989	76,245	19,675,670	22.8 %	56,839,293	76,591,208
1990	96,290	22,367,961	25.2	(14,586,666)	7,877,585
1991	57,617	28,732,958	31.4	70,187,267	98,977,842
1992	72,117	29,203,071	32.5	42,772,851	72,048,039
1993	30,065	31,183,021	35.9	60,657,772	91,870,858
1994	45,384	35,945,995	40.6	13,065,959	49,057,338
1995	71,008	37,754,338	36.1	95,862,258	133,687,604
1996	76,743	53,135,642	49.7	100,983,575	111,814,750
1997	67,913	51,851,630	47.1	176,933,369	228,852,913

* Includes financing for early retirement pensions.

Schedule of Expenses by Type

Fiscal Year Ended Sept. 30	Benefit Payments*	Refunds and Transfers	Administrative Expenses	Total
1988	\$ 17,552,602		\$ 279,905	\$ 17,832,507
1989	20,468,503	\$ 6,162	227,713	20,702,378
1990	24,660,615		374,904	25,032,219
1991	28,686,901		393,003	29,079,904
1992	34,207,792	586	465,435	34,673,813
1993	40,446,933	1,743	359,160	40,807,836
1994	44,629,521		449,033	45,078,554
1995	45,639,290		493,400	46,132,690
1996	48,795,509		429,986	49,225,495
1997	54,267,511		202,827	54,470,338

* Includes health benefits.

Schedule of Benefit Expenses by Type

Fiscal Year Ended Sept. 30	Regular Benefits	Disability Benefits	Funeral Benefits	Health Benefits	Total
1988	\$ 13,898,791	\$ 1,176,277		\$ 2,477,534	\$ 17,522,602
1989	15,735,408	1,240,742		3,492,353	20,468,503
1990	18,014,908	1,379,133		5,266,274	24,660,315
1991	20,573,564	1,534,544		6,578,793	28,686,901
1992	23,797,297	1,760,059	\$ 3,000	8,647,436	34,207,792
1993	27,681,161	1,957,605	1,500	10,806,667	40,446,933
1994	30,915,357	2,127,957	3,000	11,583,207	44,629,521
1995	33,141,186	2,366,398		10,131,706	45,639,290
1996	35,794,961	2,482,429	1,500	10,516,619	49,402,919
1997	40,536,134	2,782,100		10,949,277	54,267,511

STATISTICAL SECTION

Schedule of Retired Members by Type of Benefit September 30, 1997

Amount Monthly Benefit	Number of Retirees	Type of Retirement *						Option Selected #
		1	2	3	4	5	6	Life
\$ 1 - 400	32	24	1	2	1	4	0	32
401 - 800	61	111	77	3	2	11	0	18
801 - 1,200	488	274	153	31	3	19	8	488
1,201 - 1,600	294	219	30	23	11	6	5	294
1,601 - 2,000	160	129	8	6	6	3	8	160
2,001 - 2,400	268	224	19	14	8	1	2	268
2,401 - 2,800	388	372	3	9	1	1	2	388
2,801 - 3,200	215	210	3	1	1	0	0	215
3,201 - 3,600	38	36	0	1	0	0	1	38
3,601 - 4,000	16	16	0	0	0	0	0	16
Over 4,000	8	8	0	0	0	0	0	8
Totals	2,018	1,589	220	89	42	34	44	2,018

* Type of Retirement

- 1 - Normal retirement for age & service
- 2 - Survivor payment - normal retirement
- 3 - Duty disability retirement
- 4 - Non-duty disability retirement
- 5 - Survivor payment - duty death in service
- 6 - Survivor payment - non-duty death in service

Option Selected

Life - 100% Joint and survivors

Schedule of Average Benefit Payments

<u>Retirement Effective Dates</u>	<u>Average Monthly Benefit</u>	<u>Number of Active Retirants</u>
Period 10/01/91 to 09/30/92	\$ 1,481	1,551
Period 10/10/92 to 09/30/93	1,546	1,642
Period 10/01/93 to 09/30/94	1,597	1,759
Period 10/01/94 to 09/30/95	1,644	1,831
Period 10/01/95 to 09/30/96	1,709	1,915
Period 10/01/96 to 09/30/97	1,840	2,018

10 Year History of Membership Fiscal Years Ended September 30

